ENFIS

ROLE PROFILE

Job Title:	Optical Product Designer		
Reports To:	Engineering Manager	**Availability:**	< 3 months

Job Summary

This company is a leader in the design and development of LED arrays and light engines for high quality lighting applications. Due to developments in customer requirements, the company requires a senior engineering optical design professional to lead the development of the next generation of optical products and to bring to full maturity existing optical products within the company's product range.

Specialisation in the design and development of the next generation of optical products to integrate fully with the company's LED array products is a key requirement. The role encompasses initial concepts and design studies based on state of the art optical ideas through to prototyping, design validation and new product introduction with the satisfaction of seeing these new products in volume production.

This a wide ranging technical role focussed in a specific product sector i.e. optical product. The successful candidate will be exposed to leading cutting edge research in optical illumination products using LEDs for lighting applications and taking concepts through (if successful) to volume manufacture.

Essential Duties and Responsibilities:

- Design of all optical products including verification of performance through managing prototyping and subsequent testing.
- Establish and manage all necessary information to move from prototype to volume manufacture based on the company's new product introduction process
- Leading existing optical R&D programmes
- Developing and managing the proposal of new optical R&D programmes
- Selecting appropriate manufacturing processes and suppliers suitable for a given optical product
- Generation of new ideas and innovative technology approaches using new materials or processes
- Working closely with sub-contractors and optical consultants where necessary
- Interpret design concept brief and prepare initial ideas for consideration with sales and engineering teams.
- Manage all specification related to optical products within the company's portfolio
- Research and develop novel optical coupling methods for enhancing light output from LED arrays manufactured by the company.

Education and Experience

- Ideally PhD level education in Physics or Optical Engineering. Bachelor or Masters Degree or equivalent will be considered if relevant industrial experience is also demonstrated
- 5-10 years experience required in design of optical products, ideally for illumination applications. A good example would be automotive reflector based optical systems or reflector based luminaires.
- Extensive knowledge of optical design utilising reflective and refractive methods particularly for non-imaging illumination applications is key. It would be desirable if the candidate has experience of texturing and manipulating surface profiles to mix wavelengths in multi-wavelength illumination systems.
- Ability to develop models and optimisation schemes using both sequential and non-sequential ray tracing analysis in programmes such as Zemax is required
- Experience of working with illumination based optical programmes would be advantageous
- A knowledge of basic principles of lighting design would be beneficial using lighting design tools such as Dialux, for instance
- The candidate should be able to demonstrate a thorough working knowledge of the manufacturing processes for optical reflectors, lenses and diffusers and should be able to demonstrate the real-world limitations to design caused by compatibility with prototyping and volume manufacturing processes such as SLA, injection moulding, spinning, forming, polishing and coating processes
- Expertise in design and manufacturing processes should be accompanied by a strong appreciation of the test methods for optical illumination products in terms of luminous intensity, illuminance, luminance, spectral distribution and colour rendering.
- Ideally candidates should have experience of working in a high tech environment and must have the ability to work both on their own and effectively within a team
- A demonstrable track record of technology innovation achievements, i.e. patents, research papers or product design wins would be an advantage
- Demonstrable problem solving, project management, report writing, goal setting and project costing skills
- Ability to source components and work with global suppliers to ensure a cost effective and high quality solution